ANTELOPE VALLEY AIR QUALITY MANAGEMENT DISTRICT

RULE 461 -- GASOLINE TRANSFER AND DISPENSING
(Adopted: 01/09/76; Amended: 09/03/76; Amended: 02/04/77; Amended: 11/18/77; Amended: 02/03/78; Amended: 01/05/79; Amended: 05/04/79; Amended: 12/07/79; Amended: 01/16/81; Amended: 10/15/82; Amended: 11/01/85; Amended: 03/04/88; Amended: 07/07/89; Amended: 09/08/95; Amended: 09/15/98)

(a) Applicability

This rule applies to the transfer of Gasoline from any tank truck, trailer, or railroad tank car into any stationary storage tank or Mobile Fueller, and from any stationary storage tank or Mobile Fueller into any Mobile Fueller or Motor Vehicle fuel tank.

(b) Definitions

For the purpose of this rule, the following definitions shall apply:

(1) Aspirator-assist System: a Phase II Vapor Recovery System that uses an aspirator to create a vacuum during Gasoline dispensing to capture Gasoline Vapors. An Aspirator-assist System may also incorporate a Gasoline Vapor incinerator and/or Bellows-less Nozzles.

(2) Balance System: a Phase II Vapor Recovery System that operates on the principle of vapor displacement.

(3) Bellows-less Nozzle: any nozzle that incorporates both an assist system and a Gasoline Vapor capture mechanism at the Motor Vehicle filler neck, such that vapors are collected at the vehicle filler neck without the need for an interfacing flexible bellows, and which is certified by the California Air Resources Board (CARB) for operation as a Bellows-less Nozzle.

(4) ACARB Certified" Vapor Recovery System: any Phase I or Phase II Vapor Recovery System which has been certified by CARB as capable of recovering or processing displaced Gasoline Vapors to an efficiency of ninety-five (95) percent or greater.

(5) CARB Executive Orders: Orders published by CARB that document the requirements of specific vapor control equipment and procedures used in Phase I and Phase II Vapor Recovery Systems.

(6) Coaxial Hose: a hose that contains two passages with a configuration of a hose within a hose. One of the passages dispenses the liquid Gasoline into the vehicle fuel tank while the other passage carries the Gasoline Vapors from the vehicle fuel tank to the storage tank.

(7) Fueling Position: a fuel dispensing unit consisting of nozzle(s) and meter(s) with the capability to deliver only one fuel product at one time.

(8) Gasoline: any petroleum distillate or petroleum distillate/alcohol blend having a True Vapor Pressure greater than 200 mm Hg (3.9 psi) and less than 760 mm Hg (14.7 psi) at 100 degrees F as determined by ASTM Method D323-89.

(9) Gasoline Transfer and Dispensing Facility: a mobile system, including Mobile Fuellers, or a stationary facility consisting of one or more storage tanks and associated equipment which receive, store, and dispense Gasoline subject to the provisions of this rule.

(10) Gasoline Vapors: the organic compounds in vapor form displaced during Gasoline transfer and dispensing operations, and includes entrained liquid Gasoline.

(11) Insertion Interlock Mechanism: any CARB Certified mechanism that ensures a tight fit at the nozzle fill pipe interface and prohibits the dispensing of Gasoline unless the bellows is compressed.

(12) Liquid Removal Device: a device designed specifically to remove trapped liquid from the vapor passages of a Coaxial Hose.

(13) Liquid-tight: a liquid leak rate not exceeding three drops per minute.

(14) Mobile Fueller: any tank truck or trailer that is used to transport and dispense Gasoline from an onboard storage tank into any Motor Vehicle fuel tank.

(15) Motor Vehicle: any self-propelled vehicle as defined in Section 415 of the California Vehicle Code.

(16) Owner/operator: any person who owns, leases, or operates a Gasoline Transfer and Dispensing Facility.

(17) Poppetted Dry Break: a Phase I Vapor recovery device that opens only by connection to a mating device to ensure that no Gasoline Vapors escape from the underground storage tank before the vapor return line is connected.

(18) Pressure/vacuum Relief Valve: a valve that is installed on the vent pipes of the Gasoline storage tanks to relieve pressure or vacuum build-up at preset values of pressure or vacuum.

(19) Spill Box: an enclosed container around a Phase I fill pipe that is designed to collect Gasoline spillage resulting from disconnection between the liquid Gasoline delivery hose and the fill pipe.

(20) Submerged Fill Tube: any fill tube the discharge opening of which is entirely submerged, when the liquid level above the bottom of the tank is:

(A) 15.2 cm (6 inches), for tanks filled from the top, or

(B) 45.7 cm (18 inches) for tanks filled from the side.

(21) Vacuum-assist System: a Phase II Vapor Recovery System that uses vacuum-producing device such as a compressor or turbine to create a vacuum during Gasoline dispensing to capture Gasoline Vapors. Vacuum-assist Systems may also incorporate Gasoline Vapor incinerators and/or Bellows-less Nozzles.

(22) Vapor Check Valve: a valve that opens and closes the vapor passage to the storage tank to prevent Gasoline Vapors from escaping when the nozzle is not in use.

(23) Vapor-tight: the detection of less than 10,000 ppm hydrocarbon concentration, as determined by EPA Method 21, using an appropriate analyzer calibrated with methane.

(c) Requirements

(1) Gasoline Transfer Into Stationary Storage Tanks and Mobile Fuellers (Phase I). A person shall not transfer, permit the transfer or provide equipment for the transfer of Gasoline from any tank truck, trailer or railroad tank car into any stationary storage tank with a capacity of 950 liters (251 gallons) or more, or any Mobile Fueller tank of greater than 454 liters (120 gallons) capacity unless all of the following conditions are met:

(A) Such stationary storage tank or Mobile Fueller tank is equipped with a "CARB Certified" Submerged Fill Tube.

(B) Such stationary storage tank or Mobile Fueller tank is equipped with a "CARB Certified" Vapor Recovery System, which is maintained and operated according to the manufacturer's specifications.

(C) All vapor return lines are connected between the tank truck, trailer or railroad tank car, and the stationary storage tank or Mobile Fueller. In addition, all associated hoses, fittings, and couplings are maintained in a Liquid-tight and Vapor-tight condition, as defined under subparagraph (b)(13) and (b)(23).

(D) The hatch on any tank truck, trailer, or railroad tank car shall not be opened for more than three minutes for each visual inspection, provided that:

(i) Transfer or pumping has been stopped for at least 3 minutes prior to opening; and

(ii) The hatch is closed before transfer or pumping is resumed.

(E) Underground tank lines are gravity drained, and above-ground tanks are equipped with dry breaks, or as approved by the District,-such that upon line disconnect the liquid leak rate does not exceed 3 drops per minute.

(F) Equipment subject to this paragraph is operated and maintained, according to all of the following requirements:

(i) All fill tubes are equipped with Vapor-tight covers, including gaskets;

(ii) All dry breaks are equipped with Vapor-tight seals and dust covers;

(iii) Fixed or Spring-Loaded coaxial fill tubes are operated so that the vapor passage from the stationary storage tank or the Mobile Fueller back to the tank truck, trailer, or railroad tank car is not obstructed;

(iv) The fill tube assembly, including fill tube, fittings and gaskets, is maintained to prevent vapor leakage from any portion of the Vapor Recovery System; and

(v) All stationary storage tank or the Mobile Fueller vapor return lines without dry breaks are equipped with Vapor-tight covers, including gaskets.

(G) Any time an underground stationary storage tank is installed or replaced at any Gasoline Transfer and Dispensing Facility, a "CARB Certified" Spill Box shall be installed. The Spill Box shall be equipped with an integral Vapor-tight drain valve to return spilled Gasoline to the underground stationary storage tank.

(H) A person shall not install or permit the installation of any Phase I Vapor Recovery System of the coaxial design at any Gasoline Transfer and Dispensing Facility unless such system was certified by CARB after January 1, 1994.

(I) A person shall not install or permit the installation of any Phase I Vapor Recovery System of the dual-point design at any Gasoline Transfer and Dispensing Facility unless such system incorporates "CARB Certified" Poppetted Dry Breaks or spring-loaded Vapor Check Valves on the vapor return coupler.

(2) Gasoline Transfer Into Vehicle Fuel Tanks (Phase II).

A person shall not transfer, or permit the transfer, or provide equipment for the transfer of Gasoline from a stationary storage tank or a Mobile Fueller of greater than 454 liters (120 gallons) capacity into any Mobile Fueller of greater than 454 liters (120 gallons) capacity or any Motor Vehicle fuel tank of greater than 19 liters (5 gallons) capacity unless all of the following conditions are met:

(A) The dispensing unit used to transfer the Gasoline from the stationary storage tank or Mobile Fueller to the Mobile Fueller or Motor Vehicle fuel tank is equipped with a "CARB Certified" Vapor Recovery System.

(B) The Vapor Recovery System and associated components are operated and maintained in a Vapor-tight and Liquid-tight manner in accordance with the manufacturer's specifications and the applicable CARB certification.

(C) Equipment subject to this rule is operated and maintained with none of the defects listed in California Code of Regulations, Section 94006, Subchapter 8, Chapter 1, Part III of Title 17, as summarized in Attachment A of this rule.

(D) A person shall not install or permit the installation of any Balance System bellows-equipped nozzle at any Gasoline Transfer and Dispensing Facility unless the nozzle is equipped with a "CARB Certified" insertion interlock mechanism.

(E) A person shall not install or permit the installation of any Balance System nozzle at a new or altered Gasoline Transfer and Dispensing Facility unless a Vapor Check Valve is located in the nozzle. In addition, effective January 1, 1997, a person shall not operate or permit the operation of any Balance System nozzle unless a Vapor Check Valve is located in the nozzle.

(F) A person shall not install or permit the installation of any nozzle at a new or altered Gasoline Transfer and Dispensing Facility unless the nozzle is equipped with a Coaxial Hose. In addition, effective January 1, 1998, a person shall not operate any Gasoline-dispensing nozzle unless the nozzle is equipped with a Coaxial Hose.

(G) Unless otherwise specified in the applicable CARB Executive Orders, the inside diameter of the connection between the riser and dispenser cabinet at a new or altered Gasoline Transfer and Dispensing Facility shall not be less than 0.75 inch. If a flexible tubing is used for this connection, the material shall be appropriate for use with Gasoline and shall be equipped with a clearly visible bonding strap.

(H) Unless otherwise specified in the applicable CARB Executive Orders, all Liquid Removal Devices installed for any Gasoline-dispensing nozzle with a dispensing rate of greater than five gallons per minute shall be "CARB Certified" with a minimum liquid removal rate of five milliliters per gallon transferred.

(3) Additional Requirements

(A) A person shall not offer for sale, sell, or install any new, used, or rebuilt vapor recovery equipment unless the components are clearly identified or marked by the certified manufacturing company and/or the certified rebuilding company.

(B) For a breakdown (as defined in Rules 102 and 430) of the central vapor incineration or processing unit, the provisions of Rule 430 shall apply. "End of Cycle" shall refer to the immediate 24 hours following the notification of the breakdown for the application of Rule 430 in subparagraph (c)(3)(B).

(C) A person shall not perform or permit the "pump-out" (bulk transfer) of Gasoline from a storage tank subject to paragraph (c)(1); unless such bulk transfer is performed using a vapor collection and transfer system capable of returning the displaced vapors to the stationary storage tank.

(D) A person shall not store, or allow the storage of, Gasoline in any stationary storage tank with a capacity of 950 liters (251 gallons) or more unless such tank:
(i) Complies with Rule 463(a); or
(ii) Is equipped with a Phase I Vapor Recovery System; and
(iii) Is operated and maintained with an integral Vapor-tight drain valve to return spilled Gasoline to the storage tank, if the tank is equipped with a spill container.

(E) The owner/operator of any Gasoline Transfer and Dispensing Facility shall conspicuously post District-required signs specified in Attachment B of this rule in the immediate Gasoline dispensing area.

(F) A dispenser that is not intended to be used to fuel Motor Vehicles shall have sign posted on it to that effect.

(G) A person shall not install or permit the installation of any vent pipes on gasoline storage tanks at any Gasoline Transfer and Dispensing Facility without a "CARB Certified" pressure-vacuum relief valve. A written approval from the District is required prior to the installation or relocation of such vent pipes. In addition, effective January 1, 1997, all open vent pipes on gasoline storage tanks shall be equipped with a "CARB Certified" pressure-vacuum relief valve. Unless otherwise specified in the applicable CARB Executive Orders, pressure relief shall be set at 3 inches water column and vacuum relief shall be set at 8 inches water column. For the purpose of this requirement, vent pipes of gasoline storage tanks may be manifolded to a single valve when the stationary storage tanks are manifolded according to the applicable CARB Executive Order.

(H) Gasoline shall not be stored in open container(s) of any size or handled in any manner (spillage, spraying, etc.) that permits Gasoline or Gasoline Vapors to enter the atmosphere, contaminate the ground, or the sewer.

(I) The failure of an owner/operator of any Gasoline Transfer and Dispensing Facility to meet any requirements of paragraph (c) of this rule shall constitute a violation. Such non-compliant equipment shall be tagged "Out of Order".

(J) Except during repair activity, the "Out of Order" tag specified in subparagraph (c)(3)(I) shall not be removed and the non-compliant equipment shall not be used, permitted to be used, or provided for use unless all of the following conditions are satisfied:

(i) The non-compliant equipment has been repaired, replaced, or adjusted, as necessary.

(ii) The owner/operator has notified the District of the repairs by completing, signing and submitting the form supplied by the District;

(iii) The non-compliant equipment has been reinspected and/or authorized for use by the District.

(K) The owner/operator of a new or altered Gasoline Transfer and Dispensing Facility shall have all underground storage tank installation and associated piping configuration inspected prior to any backfilling to verify that all underground equipment is properly installed in accordance with the requirements specified in the applicable CARB Executive Order. The District shall be notified by telephone at least 24 hours prior to the backfilling.

(L) The owner/operator of a new or altered Gasoline Transfer and Dispensing Facility shall have all Phase I and Phase II Vapor Recovery Systems inspected upon completion of the construction to verify that all components were installed in accordance with the description specified in the Permit to Construct and in compliance with all District requirements. The District shall be notified in writing of any changes to the information and specifications submitted with the application under which the Permit to Construct was issued.

(4) Testing

(A) Within 30 calendar days of the initial operation, the owner/operator of a new or altered Gasoline Transfer and Dispensing Facility shall have the following performance tests conducted in accordance with the test methods specified in sub-division (d) to verify the proper installation and function of Phase I and Phase II Vapor Recovery Systems. The written test results shall be submitted to the District within 30 calendar days of each testing.

(i) Phase I Vapor Recovery System
  (I) Static pressure (leak-decay) test

(ii) Phase II Vapor Recovery System
  (I) Static pressure (leak-decay) test
  (II) Dynamic pressure (back-pressure) test
  (III) Air-to-liquid (A/L) ratio (only for Bellows-less Nozzles)
  (IV) Liquid removal rate (only for systems with a Liquid Removal Device required by CARB Executive Orders)

(B) The owner/operator of an existing Gasoline Transfer and Dispensing Facility shall have the following reverification tests conducted in accordance with the test methods specified in sub-division (d) and the following schedule, unless otherwise specified in the applicable CARB Executive Order, to verify the proper function of the Phase II Vapor Recovery System. For any of the required reverification testing which has not been conducted since January 1, 1993, the initial reverification testing shall be conducted by January 1, 1998. The written test results shall be submitted to the District within 30 calendar days of each testing.

(i) For a facility with a vacuum-assist or aspirator-assist Phase II Vapor Recovery System, a static pressure (leak-decay) test shall be conducted once every calendar year.

(ii) For a facility with a balance Phase II Vapor Recovery System, a static pressure (leak-decay) test shall be conducted once every five calendar years.

(iii) For a facility with Bellows-less Nozzles, an air-to-liquid (A/L) ratio test shall be conducted once every five calendar years.

(iv) A dynamic pressure (back-pressure) test shall be conducted once every five calendar years.

(5) Record Keeping

(A) The owner/operator of any Gasoline Transfer and Dispensing Facility shall keep the following records:
(i) Records of all inspections and repairs (e.g. receipts for parts used in the repair, work orders, etc.)
(ii) Records of all test results.
(iii) Throughput records as required by permit conditions.

(B) All records except test results shall be maintained for a period of two (2) years. Records of test results shall be maintained for a period of five (5) years. All records shall be made available to the District upon request.

(d) Test Methods

The performance and reverification tests specified in paragraph (c)(4) shall be conducted in accordance with the following test methods. All test methods referenced in this sub-division shall be the most recently approved version.

(1) The static pressure performance of a Phase I or Phase II Vapor Recovery System shall be determined by the CARB Test Procedure TP-201.3.

(2) The dynamic pressure performance of a Phase II Vapor Recovery System shall be determined by the CARB Test Procedure TP-201.4.

(3) The air-to-liquid volume ratio of a Phase II Vapor Recovery System shall be determined by the CARB Test Procedure TP-201.5.

(4) The liquid removal rate of a Phase II Vapor Recovery System shall be determined by the CARB Test Procedure TP-201.6.

(5) Any other test methods approved by the USEPA, CARB, and the District.

(e) Exemptions

The provisions of this rule shall not apply to the transfer of Gasoline:

(1) Into or from any stationary storage tank or Mobile Fueller if 75 percent or more of its monthly throughput is used for the fueling of implements of husbandry, such as vehicles defined in Division 16 (Section 36000, et seq.) of the California Vehicle Code, provided such a tank is equipped with a Submerged Fill Tube.

(2) Into or from any stationary storage tank or Mobile Fueller used exclusively for fueling agricultural wind machines.

(3) From any Mobile Fueller of greater than 454 liters (120 gallons) into any Motor Vehicle fuel tank of greater than 19 liters (5 gallons) capacity until 12 months following the general commercial availability of an applicable vapor recovery design suitable to the Mobile Fueller's gasoline transfer and storage equipment and certification of such a system by the California Air Resources Board.

[SIP: Disapproved 6/21/01, 66 FR 33177, 40 CFR 52.269(b)(3)(ii)(a) Prior version dated 1/3/96 retained; Approved 10/7/96, 61 FR 52297, 40 CFR 52.220(c)(229)(i)(A)(1); Approved 8/17/94, 59 FR 42165, 40 CFR 52.220(c) (182)(i)(A)(4); Approved 5/3/84, 49 FR 18829, 40 CFR 52.220(c)(127)(vii)(B); Approved 7/8/82, 47 FR 2968, 40 CFR 52.220(c)(95)(iv)(A); Approved _____, _____, 40 CFR 52.220(c)(66)(i)(A); Approved _____, _____, 40 CFR 52.220(c)(45)(iii)(A); Disapproved prior version of 4/21/76 retained 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(A), 40 CFR 52.220(c)(39)(vi)(B) and 40 CFR 52.229(b)(2)(i); Approved 7/26/77, 42 FR 37976, 40 CFR 52.220(c)(31)(vi)(A) and 40 CFR 52.220(c)(35)(ii)(A)]

ATTACHMENT A

CALIFORNIA CODE OF REGULATIONS, SECTION 94006
SUBCHAPTER 8, CHAPTER 1, PART III OF TITLE 17

Section 94006. Defects Substantially Impairing the Effectiveness of Vapor Recovery Systems Used in Motor Vehicle Fueling Operations.

For the purposes of Section 41960.2 of the Health and Safety Code, the following constitute equipment defects in systems for the control of Gasoline Vapors resulting from Motor Vehicle fueling operations which substantially impair the effectiveness of the systems in reducing air contaminants:

(a) Absence or disconnection of any component required to be used in the Executive Order(s) that certified the system.

(b) A vapor hose which is crimped or flattened such that the vapor passage is blocked, or the pressure drop through the vapor hose exceeds by a factor of two or more the requirements in the system certified in the CARB Executive Order(s) applicable to the system.

(c) A nozzle bellows which is torn in one or more of the following manner:

1. triangular-shaped or similar tear 2 inch or more to a side, or hole 2 inch or more in diameter or,

2. Slit 1 inch or more in length.

(d) Faceplate or flexible cone which is damaged in the following manner:

1. For balance nozzles and for nozzles for aspirator and eductor-assist type systems, damage shall be such that the capability to achieve a seal with a fill pipe interface is affected for 1/4 of the circumference of the faceplate (accumulated).

2. For nozzles for vacuum assist-type systems, more than 1/4 of the flexible cone missing.

(e) Nozzle shutoff mechanisms which malfunction in any manner.

(f) Vapor return lines, including such components as swivels, anti-recirculation valves and underground piping, which malfunction or are blocked, or restricted such that the pressure drop through the lines exceeds by factor of two or more requirements specified in the Executive Order(s) that certified the system.

(g) Vapor processing unit which is inoperative.

(h) Vacuum producing device which is inoperative.

(i) Pressure/vacuum Relief Valves, Vapor Check Valves, or dry breaks which are inoperative.

(j) Any equipment defect which is identified in an Executive Order certifying a system pursuant to the Certification Procedures incorporated in Section 94001 of Title 17, California Code of Regulations, as substantially impairing the effectiveness of the system in reducing air contaminants.

All nozzles affected by the above defects are to be considered defective.

NOTE: Authority Cited: Sections 39600, 39601, 41960.2, Health and Safety Code.

ATTACHMENT B

APCD-REQUIRED SIGNS

I. The operator shall post the following signs:

(A) "NOZZLE" operating instructions:

(B) Antelope Valley APCD" toll-free telephone number; and

(C) A "warning" stating:

"TOXIC RISK - FOR YOUR OWN PROTECTION
DO NOT BREATHE FUMES
DO NOT TOP TANKS"

II. All required signs shall conform to all of the following:

(A) For decal signs:

(i) Each sign shall be located adjacent to the dispenser price indicator (per gallon) on each side next to the driveway it serves; and

(ii) Sign shall be readable from a distance of 3 feet.

(B) All other signs:

(i) For pump toppers, one double-back sign per island;

(ii) For permanent (non-decal) signs, two single-sided or one double-sided sign(s) per two (2) dispensers.

(iii) All signs shall be readable from a distance of 6 feet.

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